

Amendments to the Claims:

This listing of the claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-19 (Cancelled).

20. (Withdrawn). A method for the treatment of a disease, which disease involves signalling of a cytokine through cyc in the pathogenesis of said disease, comprising administering to a subject in need an amount effective to bind to cyc and inhibit cyc/NIK interaction, of a polypeptide comprising:

- (a) NF- κ B inducing kinase (NIK);
- (b) a variant of (a) that maintains at least 90% sequence identity with (a) and maintains the ability thereof to bind to cyc and inhibit cyc/NIK interaction;
- (c) a pharmaceutically acceptable functional derivative of (a) prepared from the functional groups present on the lateral chains of the amino acid moieties or on the terminal N- or C- groups of the polypeptide of (a), that maintains the ability of (a) to bind to cyc and inhibit cyc/NIK interaction;

- (d) a circularly permuted derivative of (a)
that maintains the ability thereof to bind to
cyc and inhibit cyc/NIK interaction; or
- (e) a fragment of (a), which maintains the
ability thereof to bind to cyc and inhibit
cyc/NIK interaction,

with the proviso that the cytokine is other than IL-2.

21. (Withdrawn). The method according to claim
20, wherein the cytokine is IL-12.

22. (Withdrawn). The method according to claim
20, wherein the cytokine is IL-15.

23. (Withdrawn). The method according to claim
20, wherein the fragment of NIK comprises the C-terminus of
NIK (from residue 624 to 947, SEQ ID NO:19).

24. (Withdrawn). The method according to claim
20, wherein the fragment of NIK comprises NIK 640-720 (SEQ
ID NO: 18).

25. (Withdrawn). The method according to claim
20, wherein the mutant of NIK is AlyNIK.

26-65 (Cancelled).

66. (Previously Presented). A method for the
treatment and/or prevention of a disease in which activation
of a cytokine, having the common gamma chain (cyc) in its

receptor, is involved in the pathogenesis of the disease, comprising administering to a subject in need an amount effective to bind to *cyc* and inhibit *cyc*/NIK interaction, of a polypeptide comprising:

- (a) a fragment of NF- κ B inducing kinase (NIK), comprising the *cyc* binding domain (SEQ ID NO: 18), which maintains the ability thereof to bind to *cyc* and inhibit *cyc*/NIK interaction;
- (b) a variant of (a) that maintains at least 90% sequence identity with (a) and maintains the ability thereof to bind to *cyc* and inhibit *cyc*/NIK interaction;
- (c) a pharmaceutically acceptable functional derivative of (a) prepared from the functional groups present on the lateral chains of the amino acid moieties or on the terminal N- or C- groups of the polypeptide of (a), that maintains the ability of (a) to bind to *cyc* and inhibit *cyc*/NIK interaction; or
- (d) a circularly permuted derivative of (a) that maintains the ability thereof to bind to *cyc* and inhibit *cyc*/NIK interaction.

67. (Original). A method according to claim 66, wherein IL-2 is involved in the pathogenesis of the disease.

68. (Withdrawn). A method according to claim 66, wherein IL-15 is involved in the pathogenesis of the disease.

69. (Previously Presented). A method of treatment and/or prevention of a disease in which NF- κ B inducing kinase (NIK) and *cyc* interaction is involved in the pathogenesis of said disease, comprising administering to a subject in need thereof an amount effective to bind to *cyc* and inhibit *cyc*/NIK interaction, of a polypeptide comprising:

- (a) a fragment of NIK comprising the *cyc* binding domain (SEQ ID NO: 18), which maintains the ability thereof to bind to *cyc* and inhibit *cyc*/NIK interaction;
- (b) a variant of (a) that maintains at least 90% sequence identity with (a) and maintains the ability thereof to bind to *cyc* and inhibit *cyc*/NIK interaction;
- (c) a pharmaceutically acceptable functional derivative of (a) prepared from the functional groups present on the lateral chains of the amino acid moieties or on the terminal N- or

- C- groups of the polypeptide of (a), that maintains the ability of (a) to bind to *cyc* and inhibit *cyc*/NIK interaction; or
- (d) a circularly permuted derivative of (a) that maintains the ability thereof to bind to *cyc* and inhibit *cyc*/NIK interaction.

70. (Previously Presented). A method of treatment and/or prevention of a disease in which NF- κ B activation is involved, comprising administering to a subject in need thereof an amount effective to bind to *cyc* and inhibit *cyc*/NIK interaction, of a polypeptide comprising:

- (a) a fragment of NF- κ B inducing kinase (NIK) corresponding to the *cyc* binding domain (SEQ ID NO: 18), which maintains the ability thereof to bind to *cyc* and inhibit *cyc*/NIK interaction;
- (b) a variant of (a) that maintains at least 90% sequence identity with (a) and maintains the ability thereof to bind to *cyc* and inhibit *cyc*/NIK interaction;
- (c) a pharmaceutically acceptable functional derivative of (a) prepared from the functional

groups present on the lateral chains of the amino acid moieties or on the terminal N- or C- groups of the polypeptide of (a), that maintains the ability of (a) to bind to *cyc* and inhibit *cyc*/NIK interaction; or

(d) a circularly permuted derivative of (a) that maintains the ability thereof to bind to *cyc* and inhibit *cyc*/NIK interaction.

71 (Cancelled).

72. (Withdrawn). A method according to claim 69, for the treatment of cancer.

73. (Previously Presented). A method of treatment and/or prevention of a disease resulting from excessive immune responses, comprising administering to a subject in need thereof an amount effective to bind to *cyc* and inhibit *cyc*/NIK interaction, of a polypeptide comprising:

(a) a fragment of NF- κ B inducing kinase (NIK) corresponding to the *cyc* binding domain (SEQ ID NO: 18), which maintains the ability thereof to bind to *cyc* and inhibit *cyc*/NIK interaction;

- (b) a variant of (a) that maintains at least 90% sequence identity with (a) and maintains the ability thereof to bind to *cyc* and inhibit *cyc*/NIK interaction;
- (c) a pharmaceutically acceptable functional derivative of (a) prepared from the functional groups present on the lateral chains of the amino acid moieties or on the terminal N- or C- groups of the polypeptide of (a), that maintains the ability of (a) to bind to *cyc* and inhibit *cyc*/NIK interaction; or
- (d) a circularly permuted derivative of (a) that maintains the ability thereof to bind to *cyc* and inhibit *cyc*/NIK interaction.

74. (Original). A method according to claim 73, for the treatment of rheumatoid arthritis, osteoarthritis, inflammatory bowel disease, asthma, cardiac infarct, Alzheimer's disease, or atherosclerosis.

75. (Previously Presented). A method according to claim 69, for the treatment of rheumatoid arthritis, osteoarthritis, inflammatory bowel disease, asthma, cardiac infarct, Alzheimer's disease, or atherosclerosis.

76 (Previously Presented). A method for the treatment of a disease, which disease involves signalling of

a cytokine through *cyc* in the pathogenesis of said disease, comprising administering to a subject in need an amount effective to bind to *cyc* and inhibit *cyc*/NIK interaction, of a polypeptide comprising:

- (a) a fragment of NF- κ B inducing kinase (NIK) comprising NIK 640-720 (SEQ ID NO:18), which maintains the ability thereof to bind to *cyc* and inhibit *cyc*/NIK interaction;
- (b) a variant of (a) that maintains at least 90% sequence identity with (a) and maintains the ability thereof to bind to *cyc* and inhibit *cyc*/NIK interaction;
- (c) a pharmaceutically acceptable functional derivative of (a) prepared from the functional groups present on the lateral chains of the amino acid moieties or on the terminal N- or C- groups of the polypeptide of (a), that maintains the ability of (a) to bind to *cyc* and inhibit *cyc*/NIK interaction; or
- (d) a circularly permuted derivative of (a) that maintains the ability thereof to bind to *cyc* and inhibit *cyc*/NIK interaction.

77 (New). A method in accordance with claim 66, wherein said polypeptide is a fragment of NF- κ B inducing kinase (NIK), comprising the *cyc* binding domain (SEQ ID NO: 18), which maintains the ability thereof to bind to *cyc* and inhibit *cyc*/NIK interaction or a pharmaceutically acceptable functional derivative of said fragment, prepared from the functional groups present on the lateral chains of the amino acid moieties or on the terminal N- or C- groups of said fragment, that maintains the ability of said fragment to bind to *cyc* and inhibit *cyc*/NIK interaction.

78 (New). A method in accordance with claim 66, wherein said polypeptide is a fragment of NF- κ B inducing kinase (NIK), comprising the *cyc* binding domain (SEQ ID NO: 18), which maintains the ability thereof to bind to *cyc* and inhibit *cyc*/NIK interaction.

79 (New). A method in accordance with claim 78, wherein said polypeptide is the C-terminus of NIK (from residue 624 to 947, SEQ ID NO:19).

80 (New). A method in accordance with claim 78, wherein said polypeptide is NIK 640-720 (SEQ ID NO: 18).

81 (New). A method in accordance with claim 66, wherein said variant of (b) maintains at least 95% sequence identity with (a).

82 (New). A method in accordance with claim 69, wherein said polypeptide is a fragment of NF- κ B inducing kinase (NIK), comprising the *cyc* binding domain (SEQ ID NO: 18), which maintains the ability thereof to bind to *cyc* and inhibit *cyc*/NIK interaction or a pharmaceutically acceptable functional derivative of said fragment, prepared from the functional groups present on the lateral chains of the amino acid moieties or on the terminal N- or C- groups of said fragment, that maintains the ability of said fragment to bind to *cyc* and inhibit *cyc*/NIK interaction.

83 (New). A method in accordance with claim 69, wherein said polypeptide is a fragment of NF- κ B inducing kinase (NIK), comprising the *cyc* binding domain (SEQ ID NO: 18), which maintains the ability thereof to bind to *cyc* and inhibit *cyc*/NIK interaction.

84 (New). A method in accordance with claim 83, wherein said polypeptide is the C-terminus of NIK (from residue 624 to 947, SEQ ID NO:19).

85 (New). A method in accordance with claim 83, wherein said polypeptide is NIK 640-720 (SEQ ID NO: 18).

86 (New). A method in accordance with claim 69, wherein said variant of (b) maintains at least 95% sequence identity with (a).

87 (New). A method in accordance with claim 70, wherein said polypeptide is a fragment of NF- κ B inducing kinase (NIK), comprising the *cyc* binding domain (SEQ ID NO: 18), which maintains the ability thereof to bind to *cyc* and inhibit *cyc*/NIK interaction or a pharmaceutically acceptable functional derivative of said fragment, prepared from the functional groups present on the lateral chains of the amino acid moieties or on the terminal N- or C- groups of said fragment, that maintains the ability of said fragment to bind to *cyc* and inhibit *cyc*/NIK interaction.

88 (New). A method in accordance with claim 70, wherein said polypeptide is a fragment of NF- κ B inducing kinase (NIK), comprising the *cyc* binding domain (SEQ ID NO: 18), which maintains the ability thereof to bind to *cyc* and inhibit *cyc*/NIK interaction.

89 (New). A method in accordance with claim 88, wherein said polypeptide is the C-terminus of NIK (from residue 624 to 947, SEQ ID NO:19).

90 (New). A method in accordance with claim 88, wherein said polypeptide is NIK 640-720 (SEQ ID NO: 18).

91 (New). A method in accordance with claim 70, wherein said variant of (b) maintains at least 95% sequence identity with (a).

92 (New). A method in accordance with claim 73, wherein said polypeptide is a fragment of NF- κ B inducing kinase (NIK), comprising the *cyc* binding domain (SEQ ID NO: 18), which maintains the ability thereof to bind to *cyc* and inhibit *cyc*/NIK interaction or a pharmaceutically acceptable functional derivative of said fragment, prepared from the functional groups present on the lateral chains of the amino acid moieties or on the terminal N- or C- groups of said fragment, that maintains the ability of said fragment to bind to *cyc* and inhibit *cyc*/NIK interaction.

93 (New). A method in accordance with claim 73, wherein said polypeptide is a fragment of NF- κ B inducing kinase (NIK), comprising the *cyc* binding domain (SEQ ID NO: 18), which maintains the ability thereof to bind to *cyc* and inhibit *cyc*/NIK interaction.

94 (New). A method in accordance with claim 93, wherein said polypeptide is the C-terminus of NIK (from residue 624 to 947, SEQ ID NO:19).

95 (New). A method in accordance with claim 93, wherein said polypeptide is NIK 640-720 (SEQ ID NO: 18).

96 (New). A method in accordance with claim 73, wherein said variant of (b) maintains at least 95% sequence identity with (a).

97 (New). A method in accordance with claim 76, wherein said polypeptide is a fragment of NF- κ B inducing kinase (NIK), comprising the *cyc* binding domain (SEQ ID NO: 18), which maintains the ability thereof to bind to *cyc* and inhibit *cyc*/NIK interaction or a pharmaceutically acceptable functional derivative of said fragment, prepared from the functional groups present on the lateral chains of the amino acid moieties or on the terminal N- or C- groups of said fragment, that maintains the ability of said fragment to bind to *cyc* and inhibit *cyc*/NIK interaction.

98 (New). A method in accordance with claim 76, wherein said polypeptide is a fragment of NF- κ B inducing kinase (NIK), comprising the *cyc* binding domain (SEQ ID NO: 18), which maintains the ability thereof to bind to *cyc* and inhibit *cyc*/NIK interaction.

99 (New). A method in accordance with claim 98, wherein said polypeptide is the C-terminus of NIK (from residue 624 to 947, SEQ ID NO:19).

100 (New). A method in accordance with claim 98, wherein said polypeptide is NIK 640-720 (SEQ ID NO: 18).

101 (New). A method in accordance with claim 76, wherein said variant of (b) maintains at least 95% sequence identity with (a).